

Abstract

A sensor element for determining a physical property of a test gas, in particular the concentration of a gas component in a gas mixture, in particular the oxygen concentration in the exhaust gas from internal combustion engines, has a solid electrolyte body (11), an external electrode (17) exposed to the test gas situated on the solid electrolyte body (11), an internal electrode (18) situated in the solid electrolyte body (11), and an electrical resistance heater (25) which has a preferably meandering heating surface (251) being situated in the solid electrolyte body (11), and is embedded in insulation (26). The external electrode (17) is situated in a cavity (12) formed in the solid electrolyte body (11) to reduce the heat losses from the sensor element due to convection and radiation to the cold test gas flow (Fig. 1).